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19. Abstract (continued)

of these Canadian Forces personnel have not suffered any significant long-term adverse effects resulting from their service in Vietnam. For a minority of subjects (6%), however, service in Vietnam proved to be very stressful and resulted in symptoms of a stress reaction called Post-Traumatic Stress Disorder (PTSD). The importance of both war zone and post-war experiences (e.g. social support) in the development and continuation of PTSD are discussed. Policy implications for effective performance in future Canadian Forces peacekeeping efforts are presented.

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Effects of Service in Vietnam on Canadian Forces Military Personnel

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Canada has had a long history of involvement in peacekeeping activities in Vietnam. This involvement began in 1954 with the establishment by the Geneva Conference of the International Commission for Supervision and Control (ICSC). The ICSC was composed of military and civilian members from Canada, Poland, and India whose mission was to report, and hopefully, deter violations of the cease-fire agreement between the French and their Vietnamese supporters located south of the 17th parallel, and the Communist and nationalist Vietnamese located north of the 17th parallel. By the end of 1954 there were approximately 200 Canadians in both North and South Vietnam as well as Laos. A reduced Canadian presence continued for almost 19 years when the last representative of the ICSC in Hanoi departed in March, 1973. Two members of the Canadian delegation were killed during this period.

Canadian peacekeeping efforts continued after this date, however, as part of the International Commission for Control and Supervision (ICCS), which was formed following a cease-fire agreement signed in Paris on January 28, 1973 by representatives of the United States, the Republic of Vietnam (South Vietnam), the Democratic Republic of Vietnam (North Vietnam), and the Provisional Revolutionary Government of South Vietnam (Viet Cong). Members of the ICCS included Canada, Hungary, Poland, and Indonesia. Between the period 27 January to 31 July 1973 approximately 250 Canadian military personnel served in Vietnam (Directorate of History, 1979). The total number of Canadians who served in the ICCS is estimated at 282 military and 37 civilian personnel (R. Malott, personal communication 13 January 1988). One Canadian Forces member of the ICCS, Captain C.E. Laviolette, was killed on 7 April 1973.

The issue of Canadian involvement in the Vietnam war has only recently become the focus of research on the readjustment of Vietnam veterans. Stretch (1988) studied the psychosocial adjustment of 164 Canadians who served in Vietnam as part of the U.S. military. Compared to U.S. Vietnam veterans, the Canadian Vietnam veterans were found to fare poorly in terms of the prevalence of a stress reaction called Post-Traumatic Stress Disorder (PTSD). PTSD results from exposure to trauma that is generally outside the range of normal human experience and is characterized by symptoms such as

The views expressed herein are those of the author and do not necessarily represent the views of the United States Army, the United States Department of Defense, or the Department of National Defence, Canada.

recurrent and intrusive dreams and recollections of a traumatic event, a numbing of responsiveness to the external world as evidenced by feelings of detachment from others or constricted affect, and additional symptoms such as sleep disturbance, survivor guilt, and memory impairment or trouble concentrating (American Psychiatric Association, 1987). No research has focused, however, on the prevalence of disorders such as PTSD among peacekeeping forces.

While the chances of peacekeeping forces being wounded or killed are less than those for actual combatants, there are still risks involved. During the first three months of the 1973 cease-fire agreement in Vietnam approximately 7,000 violations occurred, some involving extremely large-scale operations (Department of External Affairs, 1973). In the course of investigating cease-fire violations it would not be uncommon to witness the aftermath of such violations (e.g. wounded or dead soldiers and/or civilians). In past studies of Vietnam veterans Stretch (1985, 1986a, 1986b) has shown that one does not have to be a combatant to be traumatized by war. Nurses who served in Vietnam did not actively engage in combat, yet they experienced the same prevalence of PTSD as did actual combat troops, which tends to support the hypothesis that exposure to the violent aftermath of combat and the constant threat of danger can be just as traumatic as direct combat participation (Stretch, Vail, and Maloney, 1985). The prevalence of stress reactions such as PTSD among Canadian Forces personnel in Vietnam is unknown. In the event that some Canadian military personnel did have problems resulting from their peacekeeping duties in Vietnam, it is likely that these problems went unrecognized or were misdiagnosed since the diagnosis of PTSD was not formalized until 1980.

In an effort to determine the effects of peacekeeping service in Vietnam on members of the Canadian Forces, a research project was initiated in late 1987 by the author, a U.S. Army Research Psychologist currently stationed in Canada. The primary focus of the study is on the psychosocial adjustment and prevalence of PTSD among these Canadian Forces personnel in relation to that already found for U.S. and Canadian Vietnam veterans in earlier studies by the author.

Method

Subjects consisted of members of the Canadian Forces who served in Vietnam with either the ICSC or the ICCS during the period of U.S. involvement in the war (1961-1975). Potential subjects were located by several techniques. The first was through advertisements placed in the monthly magazine published by the Royal Canadian Legion and the publication Sentinel, which is put out by the Canadian Forces. In the second technique personnel data files maintained at National Defence Headquarters in Ottawa were searched to identify names and addresses of all Canadian Forces personnel still on active duty who have had a posting in Vietnam. The third method was to contact the CANDEL ICCS Association, which is composed of military and civilian personnel who served in Vietnam with either the ICSC or the ICCS.

A coverletter, questionnaire, informed consent form and postage-paid return envelope were mailed to all subjects (N=39) identified through the first two techniques. Due to concern over maintaining the confidentiality of the membership roster of the CANDEL ICCS Association, the questionnaire packets were sent in blank, postage-paid envelopes to the president of the

Association who then supplied the names and addresses of individual members on the envelopes and mailed them. A total of 213 questionnaires were mailed to Association members. Canadians who served in Vietnam as civilians with the Department of External Affairs were excluded from the study as were military members who served in Vietnam prior to 1961.

All subjects were sent a modified copy of a research instrument entitled the Vietnam-Era Veterans Adjustment Survey (VEVAS), which has established validity and reliability in studies involving over 2700 subjects (see Stretch, 1986b for items and scale reliabilities). The VEVAS provides information on demographics, attitudes and opinions about the war, combat experiences, social support experiences during and after service in Vietnam (particularly during the first year back), and both physical and psychosocial health problems during and after service in Vietnam.

Results

Questionnaires were sent to a total of 252 current and former Canadian Forces personnel who served in Vietnam with either the ICSC or the ICCS. Twelve questionnaires were returned as undeliverable and one was returned because the individual was deceased. Completed questionnaires were received from 121 subjects for a return rate of slightly more than 50%.

The subjects range in age from 40 to 74 years with the average being just under 60 years. These subjects are nearly 18 years older than Canadians who served in Vietnam with the U.S. military (Stretch, 1988), the major reason being that the peacekeeping forces were composed of largely older, experienced career officers and enlisted personnel. Of the 89 officers (74% of sample), 47 (53%) held the rank of Major or higher while in Vietnam. Of the 31 enlisted personnel (26% of sample), 24 (77%) held the rank of Sergeant or higher. Data on rank was unavailable for one subject. Subjects spent an average of 26 years on active duty and just over 6 months in Vietnam with the overwhelming majority (86%) serving in 1973. Over 56% of subjects reported that they volunteered for duty in Vietnam. Two subjects reported being hospitalized while in Vietnam for combat-related reasons with another 15 (13%) hospitalized for noncombat-related reasons.

Racially, over 96% of subjects are white with only one Oriental, one Hispanic, one Black, and one North American Indian or Inuit. Subjects are also highly educated with 90% having graduated from high school and 40% being university graduates. Over 90% of subjects are currently married and just over 9% are either separated, widowed, or single. A total of 14 subjects have been divorced and four of these 14 (29%) report that their service in Vietnam has contributed to their divorce.

Turning to combat experiences in Vietnam, only 2 subjects reported firing their weapon at other soldiers. No subjects reported wounding or killing anyone or being directly involved in killing or wounding civilians, although 2 subjects felt they were indirectly involved in killing or wounding civilians. Fifteen subjects (12.7%) were involved in firefights in Vietnam while 22% found themselves at one time or another in a combat situation in which they thought they might not survive. Over 88% felt they were in danger of being killed or wounded in Vietnam. In terms of exposure to the violent aftermath of combat, 30% of subjects reported seeing others being killed, 72% reported seeing bodies of dead soldiers, 60% reported seeing bodies of dead civilians, 83% reported seeing wounded soldiers, and

73% reported seeing wounded civilians.

Subjects were asked a series of questions related to psychosocial health problems they may have experienced while serving in Vietnam. Over 40% of subjects reported drinking alcohol often or very often while in Vietnam but only 3 subjects reported using drugs while in Vietnam. Over 10% had trouble dealing with bad memories about their experiences with 16% reporting trouble falling asleep and 5% experiencing reoccurring bad dreams or nightmares while in Vietnam. Ten percent of subjects had trouble getting emotionally close to others and over 31% had trouble trusting others in Vietnam. Forty percent of subjects had trouble tolerating frustration while in Vietnam and 12% had trouble controlling their temper. Over 22% felt depressed while in Vietnam, 22% felt nervous a lot, and 29% felt overly aroused or "keyed-up" in Vietnam. Only 6% of subjects reported having "flashbacks" in Vietnam in which they felt like they were re-experiencing events. Eleven percent had trouble dealing with stressful experiences and over 33% felt that their actions in Vietnam were not worthwhile.

Social support experiences while in Vietnam were generally quite good. Over 92% of subjects often socialized with members of their unit and felt close to their unit members in Vietnam. Approximately 89% felt that members of their unit understood them and their problems and were supportive when they had a problem. Only 35% of subjects reported often writing to friends or relatives back home about their problems in Vietnam. Of those who did write, 46% reported receiving expressions of support from friends and 50% from relatives. When asked who helped them the most in dealing with their problems while in Vietnam, 23% of subjects reported members of their unit. Almost 64% reported they had no problems in Vietnam.

During the first year back from Vietnam only 45% of subjects reported positive attitudes from fellow Canadians toward the war itself, but over 80% reported positive attitudes from others toward their involvement in Vietnam. Attitudes toward their involvement in the war were slightly more positive (83%) from Canadian veterans of previous war eras. Over 73% of subjects often initiated conversations about their experiences in the war during their first year back and over two-thirds reported often getting together with other veterans of Vietnam to talk about their experiences. Only 7% of subjects reported experiencing negative or hostile events after returning from Vietnam that were related to their involvement there, and less than 5% of subjects reported that the way they were treated by friends, relatives, or the public in general kept them from talking about their experiences in Vietnam as much as they may have wanted.

Physical health data in the VEVAS consist of responses to a 75-item symptom checklist based on the Cornell Medical Index (Cornell University Medical College, 1974). The subject responds by indicating whether he has ever been bothered by a particular ailment or illness since entering the Canadian Forces and, if so, whether he is still bothered. These 75 items comprise six different categories or clusters of health symptoms: respiratory, cardiovascular, gastrointestinal, nervous system, skin disorders, and general health. Items within each category are summed to provide total scores. The results reveal that the current health of these veterans is quite good. Only six of the 75 items were checked as being currently experienced by 10% or more of the subjects. These items include suffering from hay fever (11%), high blood pressure (11%), often suffering from an upset stomach (12%), frequent indigestion (10%), hemorrhoids (18%), and being overweight (15%).

If one looks at the prevalence of physical health problems at any time since entering the Canadian Forces, the number of items checked as being experienced by more than 10% of the subjects is sixteen. These items include: having to clear one's throat frequently (11%), suffering from a continually stuffed up nose (12%), often catching severe colds (11%), frequently suffering from heavy chest colds (11%), suffering from hay fever (16%), high blood pressure (22%), pains in the heart or chest (18%), often suffering from an upset stomach (15%), suffering from frequent indigestion (13%), frequent loose bowel movements (12%), hemorrhoids (33%), skin rashes (12%), being tired out completely from working (14%), being constantly tired and exhausted upon getting up in the morning (11%), and being overweight (25%).

To determine the relationship between physical health and psychosocial health, Pearson correlations were computed between scores representing the eleven symptoms of PTSD and all six categories of current physical health. Results indicate highly significant positive correlations between PTSD symptoms and respiratory problems ($r = 0.28$, $p < 0.05$), cardiovascular problems ($r = 0.36$, $p < 0.01$), gastrointestinal problems ($r = 0.40$, $p < 0.001$), and nervous system problems ($r = 0.54$, $p < 0.01$).

The same questions concerning psychosocial health problems that subjects answered for the period of their service in Vietnam were also answered for the present. Currently only 13% of subjects report drinking alcohol often or very often with an additional 54% drinking occasionally. No current drug use was reported. While 10% of subjects currently have trouble falling asleep, only 4% have trouble dealing with bad memories about experiences in Vietnam and less than 3% report reoccurring bad dreams or nightmares about events in Vietnam. Sixteen percent have trouble getting emotionally close to others and almost 18% have trouble expressing their feelings to those they care about. Twenty-three percent report trouble tolerating frustration and 13% have trouble controlling their temper. Eleven percent feel depressed a lot while 9% feel nervous a lot and 16% report feeling overly aroused or "keyed-up". Approximately 7% of subjects report having "flashbacks" in which they feel like they are re-experiencing events back in Vietnam. Fourteen percent of subjects report trouble trusting other people with an equal number reporting trouble dealing with stressful experiences. Over 21% of subjects currently feel that their actions in Vietnam were not worthwhile.

In addition to noting the kinds of problems reported by subjects both during their service in Vietnam and at the present time, particular patterns of problems representing the symptoms of Post-Traumatic Stress Disorder (PTSD) were identified to determine the prevalence of this disorder. Results indicate that three subjects (2.5%) are currently experiencing symptoms of PTSD. Six subjects (5.0%) reported experiencing symptoms of PTSD during their service in Vietnam. By comparing those subjects reporting current PTSD symptoms with those reporting symptoms during their service in Vietnam, one can calculate additional prevalence rates representing the categories of Acute, Chronic, and Delayed PTSD. Four subjects (3.3%) reported symptoms of PTSD during their service in Vietnam but do not report being bothered by symptoms at the present time. These subjects may be considered to have experienced "Acute" PTSD, although it is possible these symptoms may have lasted more than six months, contrary to guidelines specified in DSM-III, the third edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1987). One subject (0.8%) reported no symptoms of PTSD during service in Vietnam but

does report symptoms of PTSD at the present time. This subject may be thought of as having "Delayed" PTSD. Two other subjects (1.7%) reported being bothered by symptoms of PTSD while in Vietnam and report still being bothered by symptoms of PTSD at the present time. These subjects are considered to have "Chronic" PTSD. These mutually exclusive categories may be combined to yield an "Overall" PTSD rate consisting of the percentage of subjects who have experienced symptoms of PTSD at any time during or after service in Vietnam. Seven subjects fit this category for an overall rate of 5.8%.

In order to determine which factors may have had a significant effect on the PTSD symptomatology of subjects, a multiple regression analysis was performed. Variables representing combat experiences (COMBAT), social support received during service in Vietnam (VSS), social support received during the first year back from Vietnam (FYSS), and the year during which the subject served in Vietnam (WARYEAR) were regressed against a variable representing the eleven symptoms of current PTSD (CPTSD) measured in the VEVAS. (For a more detailed description of the items in each variable the reader is referred to Stretch, 1986b). Interaction terms for these variables were computed by standardizing responses via Z-score transformations and entered into the regression equation. This procedure allows the regression analysis to test interactions among the variables similar to analysis of variance, but does not require that the independent variables be grouped into discrete levels.

The results of this regression analysis on the variable CPTSD (R-Square = 0.33) revealed a highly significant main effect for combat experience ($F[1,117] = 8.73, p < 0.01$) and main effects which approached, but did not exceed, levels of conventional statistical significance for first year social support ($F[1,117] = 2.61, p = 0.10$) and the year the subject served in Vietnam ($F[1,117] = 3.53, p = 0.06$). In addition, a highly significant interaction was found between combat experience and first year social support ($F[1,117] = 10.93, p < 0.01$). These results indicate that increased combat experience is associated with increased severity of PTSD symptomatology, and subjects whose social support experiences during the first year back from Vietnam were primarily positive and supportive in nature have significantly lower levels of PTSD than do subjects whose experiences were critical or nonsupportive.

As a means of determining the nature of the significant FYSS x COMBAT interaction, subjects were divided into four groups on the basis of their scores on the variables FYSS and COMBAT (High FYSS/High COMBAT, High FYSS/Low COMBAT, Low FYSS/High COMBAT, Low FYSS/Low COMBAT). Results of t-test comparisons of the means for each of these four groups revealed that the combination of low combat experience with high first year social support ($M = 3.54$) was associated with the least amount of PTSD symptomatology while the combination of high combat experience and low first year social support ($M = 8.75$) yielded the greatest amount of PTSD symptomatology ($t[88] = 2.07, p < 0.05$).

In order to determine which factors may have influenced the development of PTSD symptoms during service in Vietnam, the variables COMBAT, VSS, WARYEAR and all computed interaction terms were regressed against the variable VPTSD, which represents the eleven items in the VEVAS measuring symptoms of PTSD during service in Vietnam. The variable FYSS was not included in this analysis since it represents events which took place after service in Vietnam. The results of this analysis (R-Square = 0.27) revealed

highly significant main effects for combat experience ($F[1,119] = 24.18, p < 0.01$) and the year of service in Vietnam ($F[1,119] = 6.64, p < 0.01$). The effect for social support during Vietnam approached, but did not exceed, statistical significance ($F[1,119] = 3.01, p = 0.08$). No significant interactions were found.

Increased combat experience was found to be significantly related to increased levels of PTSD symptomatology during service in Vietnam. Subjects who served in Vietnam prior to 1973 with the ICSC were found to have significantly more reported PTSD symptomatology during their service in Vietnam than subjects who served during and after 1973 with the ICSC.

Although subjects do report experiencing various psychosocial health problems, the overwhelming majority continue to look upon their service in the Canadian Forces and as peacekeepers in Vietnam as positive and beneficial. Over 83% report that if another war similar to Vietnam broke out they would be willing to serve in a similar capacity. Seventy-five percent of subjects report that their military experiences have helped them get ahead in their job or career. Ninety-five percent of subjects feel that their service in the military has helped them become a better person and 76% report that their service in Vietnam has helped them in this regard. In the event of a future war, 73% feel that they would be a more effective soldier because of their service in Vietnam. Finally, over 98% of subjects feel that the overall impact of their military service on their life has been positive, and over 83% feel the same way about their service in Vietnam.

Discussion

The results of this study have demonstrated that the overwhelming majority of Canadian Forces personnel who served in Vietnam on peacekeeping duty have not suffered any long-term adverse effects resulting from their service. Although a fair number of subjects (10-30%) reported experiencing various kinds of psychosocial problems both during service in Vietnam and at the present time, these problems appear to be relatively minor in that subjects have continued to cope and are successful, healthy, contributing members of society. Their military service, including service in Vietnam, has been of great importance to them in their career and personal development. Most subjects look upon their service in Vietnam as just another posting. They do not consider themselves "Vietnam veterans" in the sense that other Canadians who served with the U.S. military do. Many subjects are justifiably proud of their role as peacekeepers in Vietnam, although nearly one-quarter still feel that their actions in Vietnam were not worthwhile.

For a minority of subjects, however, service in Vietnam was very stressful and resulted in symptoms of Post-Traumatic Stress Disorder. The reported rates of current (2.5%), past (5.0%), and overall (5.8%) PTSD compare very favorably with rates found among other U.S. and Canadian veterans who served in Vietnam (see Table I). The most comparable sample in terms of non-combat duty would be the U.S. Army Nurse Corps members. Both groups did not actively participate in combat but were exposed to the often violent aftermath of combat (witnessing dead and wounded personnel) and were still in danger, even though they were noncombatants.

One may argue that the reported rates of PTSD for Canadian Forces personnel may not be due to Vietnam at all, but to other types of traumatic experiences. Depending upon which comparison group of Vietnam-Era veterans used, the data in Table I can support both views. For example, the current rate of PTSD among Canadian Forces personnel (2.5%) is virtually identical to that of active duty U.S. Army Vietnam-Era veterans (2.3%). (A Vietnam-Era veteran is defined as someone who was on active duty during the period of the Vietnam war but did not serve in Vietnam.) If you compare the Canadian Forces (CF) personnel to active duty Vietnam-Era nurses, however, the rate for CF personnel is over 3 times higher (2.5% vs 0.8%). Compared to U.S. Army Reserve Vietnam-Era veterans, the rate of current PTSD is two-thirds higher (2.5% vs 1.5%). The rate for Vietnam-era civilians (10%) is much higher because these veterans are experiencing some type of medical/psychiatric problem for which they are currently receiving disability compensation, which increases the likelihood of finding stress-related disorders such as PTSD. Although this comparison only deals with current PTSD rates, if the U.S. Vietnam-Era veterans had had problems with PTSD in the past it is likely that they would have been medically discharged from the military and become the responsibility of the Veterans Administration. The high rate of PTSD found among the VA civilian Vietnam-era veterans would tend to support this argument. Thus a more accurate comparison might be the overall PTSD rate for Canadian Forces personnel (5.8%) which is indeed much higher than among Vietnam-Era veterans.

The results of the regression analyses confirm past findings on the importance of both war zone and post-war experiences (e.g. social support) on the development of stress reactions such as PTSD. The findings confirm the observation that one does not have to be a combatant to be traumatized by war. Exposure to danger and to the violent aftermath of combat (seeing dead bodies and/or wounded personnel) proved to be traumatic for several Canadian Forces noncombatant personnel as it was for noncombatant U.S. Army nurses. Social support experiences, particularly those encountered during the first year back from Vietnam, were demonstrated to have a significant effect on the prevalence of PTSD and acted as a moderator variable on the effects of combat experience in Vietnam.

Several policy implications for effective performance in future Canadian Forces peacekeeping efforts may be inferred from this study. One is the need for awareness of the potential negative effects of peacekeeping duties on the psychosocial health of CF personnel. One must look beyond the obvious, traditional forms of stress reactions resulting from actual combat (combat stress reaction, battle fatigue, etc.) to the more insidious and less obvious stress reactions such as PTSD. Another is the various ways in which stress can manifest itself. Although one cannot argue cause and effect on the basis of correlational data, it is evident from the observed significant relationship between PTSD symptoms and self-reported physical health that exposure to stressful experiences may result in both physical and psychosocial health problems.

Personnel returning from peacekeeping duties should be thoroughly debriefed by mental health professionals and given the opportunity to work through any stressful experiences they faced. In this regard, CF mental health personnel should be specifically trained to recognize and treat stress reactions such as PTSD. One of the major problems U.S. Vietnam veterans faced was the failure of mental health professionals to recognize symptoms of delayed stress and develop appropriate treatment strategies.

General medical officers should also undergo this same training since soldiers are often reluctant to talk about or will deny having mental health problems, but will more readily admit to physical health problems which the trained physician will recognize as being possibly stress-related.

Societal support for the peacekeeping role should be carefully assessed before troops are committed to ensure that returning personnel do not have to bear the brunt of negative societal reactions to the decision to send CF personnel on such missions. Greater public awareness of the positive value of peacekeeping roles by Canadian Forces personnel may also help peacekeepers cope with any problems they experience.

References

- American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (third ed., revised), Washington DC: Author.
- Cornell University Medical College (1974). Cornell medical index health questionnaire. New York: Author.
- Department of External Affairs. (1973). A view at close quarters of the peacekeeping problem in Vietnam. A report to the House of Commons Standing Committee on External Affairs and National Defence on March 21, 1973, by the Secretary of State for External Affairs, the Honourable Mitchell Sharp. Ottawa, Canada: Author.
- Directorate of History. (1979). International Commission for Control and Supervision Canadian Forces Strengths (Report No. 79/715). Ottawa, Canada: National Defence Headquarters.
- Stretch, R. (1985). Posttraumatic stress disorder among U.S. Army Reserve Vietnam and Vietnam-Era veterans. Journal of Consulting and Clinical Psychology, 53, 935-936.
- Stretch, R. (1986a). Incidence and etiology of post-traumatic stress disorder among active duty Army personnel. Journal of Applied Social Psychology, 16, 464-481.
- Stretch, R. (1986b). Post-traumatic stress disorder among Vietnam and Vietnam-era veterans. In C.R. Figley (Ed.) Trauma and Its Wake, Volume II: Traumatic Stress Theory, Research, and Intervention (pp. 156-192). New York: Brunner/Mazel.
- Stretch, R. (1988, October). Post-traumatic stress disorder among Canadian Vietnam veterans. Paper presented at the annual meeting of the Society for Traumatic Stress Studies, Dallas, Texas.
- Stretch, R., Vail, J., and Maloney, J. (1985). Posttraumatic stress disorder among Army Nurse Corps Vietnam veterans. Journal of Consulting and Clinical Psychology, 53, 704-708.

Table I. PTSD COMPARISONS AMONG CANADIAN FORCES ICSC/ICCS VIETNAM VETERANS AND U.S./CANADIAN VIETNAM AND VIETNAM-ERA VETERANS

	US ARMY	NURSES	USAR ¹	US CIVILIANS	CANADIANS	ICSC/ICCS
	N=238	N=361	N=677	N=499	N=164	N=121
<u>VIETNAM VETERANS</u>						
CURRENT PTSD	5.1%	3.3%	11.2%	32.1%	54.9%	2.5%
VIETNAM PTSD	10.5%	9.1%	12.4%	25.5%	50.6%	5.0%
ACUTE PTSD	7.1%	7.2%	6.6%	8.2%	10.4%	3.3%
CHRONIC PTSD	3.4%	1.9%	5.8%	17.2%	40.2%	1.7%
DELAYED PTSD	1.7%	1.4%	5.5%	14.8%	14.6%	0.8%
OVERALL PTSD	12.2%	10.5%	17.9%	40.2%	65.2%	5.8%
<u>VIETNAM-ERA VETS</u>						
	N=85	N=345	N=258	N=249		
CURRENT PTSD	2.3%	0.8%	1.5%	10.0%	NA	NA

¹USAR = US ARMY RESERVE